DOCUMENT RESUME

ED 052 159 24 SP 005 042

AUTHOR Baker, Harry P.
TITLE Film and Video Tape Feedback: A Review of the Literature.
INSTITUTION Texas Univ., Austin. Research and Development Center for Teacher Education.
SPONS AGENCY Office of Education (DHEW), Washington, D.C. Bureau of Research.
BUREAU NO BR-5-0249
PUB DATE Nov 70
CONTRACT OEC-6-10-108
NOTE 77p.; Report Series No. 53

EDRS PRICE EDRS Price MF-$0.65 HC-$3.29
DESCRIPTORS *Behavior Change, *Counseling, *Feedback, Microteaching, *Self Concept, *Video Tape Recordings

ABSTRACT

This review is concerned with self-confrontation counseling, which is defined as facing a subject with inconsistencies in his motivations or evasions. Such counseling involves two elements: the playback to a subject of his videotaped activity to allow him to view himself as others view him, and feedback to the subject in relation to the videotape. This reinforcement process is considered by many to be the single most important concept in understanding the learning process and an important variable in producing change. It is essential for the counselor to highlight important elements of the feedback process by means of supervisory conferences or critiques. Many of the studies examined involve dissonance theory, that is, the psychological tension when the self image and the recorded behavior are not in agreement. Self-confrontation can lead to behavior change by bringing the subject to a better understanding of his real self, provided that the message received is not seen as too threatening. Individual personality differences affect the self-confrontation experience and the document examines research studies which indicate that subjects with high and low self concepts tend to act in accordance with their self concept and that a low self concept reduces the probability of experiencing dissonance between present behavior and future valued goals. There is a bibliography of 147 items. (MBM)

ED052159

FILM AND VIDEO TAPE FEEDBACK: A REVIEW OF THE LITERATURE

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY

Harry P. Baker

Report Series No. 53

November, 1970

The Research and Development Center for Teacher Education

The University of Texas at Austin

The research discussed herein was supported in part by the U.S. Office of Education Contract OE 6-10-108, The Research and Development Center for Teacher Education. The opinions expressed herein do not necessarily reflect the position or policy of the Office of Education and no official endorsement by the Office of Education should be inferred.

SP005042

FILM AND VIDEO TAPE FEEDBACK:

A REVIEW OF THE LITERATURE

Harry P. Baker

Film or video tape feedback has been used in a variety of disciplines and for a variety of purposes. It has been used extensively in individual therapy (Geertsma and Reivich, 1965; Boyd and Sisney, 1967), treatment of alcoholics (Carrere, 1958), desensitization of fear through video tape feedback (Woody and Schauble, 1967), family counseling (Alger, 1966; Spitzer, Jackson and Satir, 1964), in group therapy (Stoller, 1968), in the training of counselors (Walz and Johnston, 1963; Schiff and Reivich, 1964; Kagan, Krathwohl, and Miller, 1963) and in industry (Griver, Robinson, and Cochran, 1966; Curl, 1967; DeSoto, 1967). It is probably in the field of education that film and video tape feedback has been used most extensively.

Early studies include those of Ricker (1964), Acheson (1964), and Schueler and Gold (1964). By far the most widely known and used method of video tape or film feedback is within the field of education microteaching, based on the work done by Bandura and Walters (1963). For a comprehensive list of articles and studies relating to microteaching, see Jensen (1968).

The approach that this review of the literature is concerned about is that of self confrontation counseling. Just as microteaching grows out of the work done by modelling by Bandura, so does self confrontation counseling grow out of research and theory in psychotherapy.

Confrontation is defined by Stoller (1968) as "facing a patient with inconsistencies in his motivations or evasions." Anderson defines it more generally as "an act by which the therapist points out to the client a discrepancy between his own and the client's way of viewing reality"; it may be directed toward the constructive behavior of the client, or his destructive behavior; it may involve interpersonal discrepancies, or intrapersonal discrepancies. In any case confrontation represents one way of providing feedback to a client out of a number of possible ways. In the present review the term will be used not only in the above two senses, but in the sense of "feedback" in general.

This latter term will be employed in the present study in the same sense that Benne, Bradford and Lippitt (1964) and

Stoller (1968) use it: "feedback, as used here, signifies verbal and non-verbal responses from others to a unit of behavior, provided as close in time to the behavior as possible, and capable of being perceived and utilized by the individual initiating the behavior. It may serve to steer and give direction to subsequent behavior. It may also serve to stimulate changes in the behavior, feeling, attitude, perception, and knowledge of the initiator." Whereas Stoller makes a distinction between feedback and interpretation, we will include interpretation as a kind of feedback; and whereas Benne, Bradford and Lippitt define feedback as being "as close in time to the behavior as possible," we will consider as feedback any response from others to a unit of behavior given to the subject at any time following the viewing of such behavior.

"Self confrontation counseling" involves two elements: first, it involves the playback to a client, or subject, some filmed or videotaped activity in which the subject is engaged, whether this be a stressful dyadic interaction (Nielsen, 1964), ego-involving professional activity of the subject, such as teaching (Thoreson, 1966) or counseling (Kagan, Krathwohl and Miller, 1963), or interviews of the subject with a counselor (Boyd and Sisney, 1967) -- such playback allowing the subject to view himself as others view him, perhaps for the first time. Second, self confrontation counseling involves feedback to the

subject that is attendant to the video or film playback. This is sometimes referred to in the literature as "focusing" (Stoller, 1968; Young, 1968) or "cueing" (Bush, 1967) and is to be understood in the same sense as "feedback" defined above.

The notion of feedback, or reinforcement, seems to be the most useful point of departure for a review of the literature on self confrontation. It underlies the traditional learning theories of Thorndike, Gutherie, Hull and Skinner. Gagne and Bolles (1963) state that "at present there seems to be no contrary evidence to the general conclusion that learning is facilitated by frequent, immediate and positive reinforcement." Benne, Bradford and Lippitt (1964) view it as probably the single most important concept in understanding the learning process.

Further, feedback of information relevant to one's change in behavior is seen as an important variable in the producing of that change. This again is consistent with traditional learning theory (Benne, Bradford and Lippitt, 1964), is derived from information theory (Frick, 1959), and particularly from the feedback model of learning developed by Miller, Galanter and Pribram (1960). Stated generally by Kolb, Winter and Berlew (1968) the relationship of feedback and behavior change is: "the more an individual can effectively utilize the feedback of information appropriate to his change project, the more successful he will be in attaining his change goal." The concept of "change

goal" is important here, as the reason for self confrontation involves the moving of an individual towards a goal, whether that goal is in the mind of the one confronting, or whether it is as-yet-to-be-formulated in the mind of the subject or client. The former connotes more the notion of shaping and reinforcement, reward and punishment; the latter involves more the notion of expectancy, ideal, discrepancy and dissonance. These two approaches, that of shaping-reinforcement and that of dissonance reduction (Staines, 1969), seem to be the two basic approaches within which most of the research in the area of film or video tape feedback has been done. The former is best exemplified in the behavior therapy model, and uses the more traditional concepts of reinforcement, reward, stimuli,etc.; also it tends to conceive of man more as manipulated by his environment, reactive. The latter is best illustrated by the cognitive dissonance model, and it will tend to use such concepts as expectancy, discrepancy, dissonance, committment, self-concept, etc. It tends to see man more as proactive, having within himself the capacity to recognize the discrepancy between his actual behavior and what he desires to be, and to commit himself to a valued goal (Zimbardo, 1969; Kolb, Winter and Berlew, 1968).

Cueing and Focusing

Essential to both conceptual approaches described above is the necessity for "highlighting" important elements of the

feedback process (Skinner, 1938). In the case of more involved complicated feedback situations, for example with verbal mediation, the highlighting of desired behavior may be a more difficult thing, involving the mysterious skills of the counselor or of the expert teacher. In any case, feedback, self confrontation, or whatever, unless accompanied by appropriate shaping behavior or some kind of focusing, has not been found to significantly change behavior (Staines, 1969; Bush, 1967; Stoller, 1968). Cooper and Stroud (1967) commenting on the use of video tape in feedback to student teachers state that "the most inefficient use of the video tape is to replay the entire lesson and just sit and watch it. The supervisor needs to point out the specific things...on which he wants the intern to focus. He needs to replay small segments to emphasize or clarify certain points." Thus Bush also, in the same context of microteaching, states that a person's viewing of self on video tape with no one else present turned out to be very ineffective in terms of a teacher's learning new behavior. He states that "it appears that the trainee in viewing the behavior has no idea of what to look for" (Bush, 1967); further, he found that in an experiment to test this very point, trainees who had been cued learned desired teacher behavior to a significantly greater degree than trainees who did not receive this cueing. In this instance, cueing was done during a modeling session (i.e. before the teacher taught)

rather than during a video tape feedback session. In still another study in the context of microteaching, Young (1968) made the distinction between "contingent focus" and "non-contingent focus," the first referring to the procedure of focusing a trainee's attention on the specific aspects of a teaching skill to be learned at the same time it occurs on video tape, either from the trainee's own performance or from a modeling performance, and the second referring to the procedure of focusing the attention of the teacher on a skill, but not simultaneously with each occurrence of the behavior on a video taped performance. As predicted, and as one would expect from learning theory, Young found that contingent focus, whether it was done in a modeling session or whether it was given during the trainee's viewing of her own performance, was more effective than non-contingent focus. Similarly, a study reported by Kallenback (1966) tested the effects of self feedback vs. reinforcement by another on the acquisition of a teaching skill and found that self feedback was relatively ineffective as compared with another's pointing out of salient cues in teaching and reinforcing the trainee when the desired behavior occurred.

Studies outside the context of micro-teaching indicate the same findings. In an early study that did not involve video or film feedback, Ward and Bednak (1964) found that psychiatric patients who were shown photographs of themselves and who had

interviews which focused on the details of the photographs showed significant gains on a posttest measure as compared with patients who had the photos shown to them but who did not have the accompanying interview. Geertsma and Reivich (1965), in their study of a client described as having a character disorder with mixed neurotic features, found that repetitive self observation on the part of the client (by video tape) was effective in changing the client's behavior. They state moreover that the critical factor in the video feedback's success was the therapist's cueing function: "In general terms, the therapist served the function of directing attention to cues he deemed important in the playback tapes. After this cueing and motivating function had been performed, the playback proved useful in presenting further evidence and examples. The subject had to be taught to make process comments" (cfr. Staines, 1969).

In an early study Acheson (1964) found that video taped feedback of a teacher's performance with supervisory conference (both direct and indirect guidance) was significantly more effective with teachers than video taped feedback without supervisory conferences accompanying it. Unfortunately, no measure was taken to test the effect of indirect guidance on the part of the supervisors vs. direct guidance.

In another early study, this one done with sixth grade children, Cole et al. (1963) suggested the importance of pointing out the relevant aspects of filmed activity taken of the child

in their classroom in producing any change in self concept for the children. The experimental group showed gains in the predicted direction, though not always attaining statistical significance, in comparison with the control group.

Finally, in a study reporting negative results, Rousch (1969) concludes that there was no change in teacher behavior attributable to video tape feedback, even with the additional input of critiques and type-scripts of the teaching sessions. Unfortunately the author does not describe what the critiques consisted of. From the context it appears that they were global comments on the teacher's performance and not the pointing out of specific behaviors on the video tape. If in fact this were the case, this study is another instance of feedback without specific focusing or highlighting being ineffective in producing teacher change.

We have already cited traditional learning theory for giving us the reason why such cueing or focusing is important. In the absence of such cues, subjects "have no ideas what to look for" when viewing video tapes of themselves (Bush, 1968). Stoller (1968), discussing much more complex behavior than that which is usually involved in micro-teaching studies, speculates further as to why such cueing is important: "People generally develop learned insensitivity to much of their own behavior. Learning about oneself would seem to require somewhat different conditions and circumstances than learning about anything else.

This is partly the result of the long history of biased self attitude with which a person has to contend. But it is also a function of looking at oneself in a particular way, of seeing only those aspects of himself which tend to maintain a level of comfort. In order to counteract such long term perceptual styles, a particular kind of presentation is required." Such a presentation is attempted through the highlighting or cueing mentioned in the above studies.

In a different context, that of the relative force of therapeutic activity, Staines suggests that the potency and direction of therapeutic reinforcement will strongly influence the effectiveness of such reinforcement. Thus, citing several studies (e.g. Bergman, 1951; Speisman, 1959) Staines finds that deep interpretation by a therapist to a client generally acts as an aversive stimulus and is negatively reinforcing; moderate interpretation -- that which articulates what the client is feeling but what he cannot quite articulate himself -- is maximally reinforcing, and shallow interpretation (reflection) while very effective at the beginning of therapy is minimally reinforcing. It follows that where there is no interpretation, (or what we have called cueing, focusing, i.e., the pointing out of what is important), such lack of interpretation equals nil reinforcement and hence only chance behavior change.

There are studies which seem to controvert the above. The Oregon school system of Corvallis ran a study (Jensen, 1963)

wherein video tape feedback was given to inservice teachers but without any cueing or supervisor/counselor feedback. Yet these teachers improved significantly more than did other groups who did not receive video tape feedback. Though at first this study seems to provide negative evidence to the other studies we have cited, there was an aspect of the study which, it can be argued, provided for a kind of highlighting, or focusing of the teachers' attention on certain facets of their behavior: prior to the video taped performance, the teachers were asked to make self evaluations of the teaching and then set the goals they would like to/expected to achieve in the video taped performance. Thus it was against this background that the teachers viewed their video tapes. In other words, though there was no direct feedback by others, or shaping behavior whether through counselor or supervisor, these teachers were still cued by the statement of behavioral objects which they had set for themselves, and the resultant discrepancy between their goals and their actual performances.

Another study which seems to minimize the importance of cueing is that of Smith and Clifton (1961). In this study the objective was to determine if one's concept of his skill changes after viewing films of himself engaged in that skill. It was found that there was a change, but only if the subject viewed himself alone engaged in the skill, as opposed to viewing himself as a member of a group all engaged in the skill. Again, at first

sight there seemed to be no cueing; but as in the above study there was a kind of cueing involved in that the skill involved was a very clearcut focused one (a specific motor task), and the fact that one could attend specifically to this was probably enough to make for discrepancy between what one thought one was doing and what one actually viewed. The fact that such a result did not occur when one viewed oneself as a member of a group strengthens this interpretation. As a member of a group one is more apt to be engaged in social comparison process (Festinger, 1954), comparing himself with how others are doing, rather than comparing himself with his own ideal.

In summing up, one might say that the necessity of reinforcement or of feedback in learning is an accepted principle in psychology, almost an assumption. While a program of educational research, that of microteaching (Bush, 1967; McDonald, Allen and Seidman, 1968) and a related program of counseling research (Ivey et al., 1968) are based on this principle, they are basing themselves primarily on the work done on modeling (BAndura and Walters, 1963). In almost all the studies we have cited, some kind of reinforcement process is utilized, either consciously or unconsciously (Staines, 1969).

Self Confrontation and Dissonance Theory

Since many of the studies to follow either implicitly or explicitly involve dissonance theory, a closer look at the

postulates of dissonance theory is required. Festinger defines cognitive dissonance, in a broad sense, as a psychological tension having motivational characteristics. The theory speaks primarily about the conditions that arouse dissonance in an individual and the various ways in which dissonance reduction may take place. The focus of the theory is on cognitive elements and the relationship between them. Cognitive elements are items of information or cognitions about oneself, one's behavior, or one's environment. (The use of "cognitive" does not rule out the importance of emotion; indeed the dissonance aroused in an individual may not follow any particular rules of logic or reason. In other words, the consonance or dissonance referred to in the theory is psychological, not logical.... And though this gives great difficulty in typing down the theory as a bona fide theory, it does not stop it from being an amazingly fertile heuristic device (Aronson, 1968).) Two cognitions are said to be consonant if they are mutually consistent, that is, if one follows from, implies, or is compatible with the other. Thus (presumed) knowledge of oneself as a loving nurturant person and the viewing of oneself as deeply involved with children in the classroom, showing care and fondness for them, are consonant elements. Dissonance is said to exist when two cognitive elements, occurring together, are mutually inconsistent; that is, one follows from the obverse of the other or is incompatible with the

other. The cognition or (presumed) knowledge of oneself as a loving nurturant person and the viewing of oneself engaging in markedly hostile, carping, mean behavior are dissonant elements. The central hypothesis of the theory holds that the presence of dissonance gives rise to pressure to reduce that dissonance and the strength of this pressure is a direct function of the magnitude of the existing dissonance. Thus, with reference to the person who views self as loving-nurturant, the theory would predict that the greater the self image as loving and the more hostile the behavior engaged in, the more dissonance experienced and the greater the pressure to reduce it. In contrast, the more that a viewer saw himself as, say, "reserved-fair-nonsense" the less dissonance he would experience in viewing himself as engaging in hostile ("hard but fair") behavior, and the less pressure would exist for dissonance reduction.

Originally proposed by Festinger in the area of social psychology, dissonance theory has increasingly been used in therapy investigations. In 1962 Bergin studied therapist interpretations in terms of dissonance arousing messages. Levy (1963) suggested a theory of therapist interpretation and client improvement completely in terms of dissonance theory, progress in therapy being proportionate to the client's being able to assimilate increasingly dissonant messages from the therapist (i.e. dissonant from his actual behavior). Goldstein, Heller and Sechrest use the dissonance model twice in their book on

behavior change in psychotherapy (1966) -- to explain (and suggest) how client attraction to the therapist may be maximized, and to explain the influence of initiation on the attractiveness of a (therapy) group to a potential group member. And in 1969 Staines explored the cognitive dissonance theory on discrepancy to explain how communications from a therapist influence the verbal behavior of clients -- finding a close similarity among dissonance theory explanation, that proposed by the operant emphasis on the reinforcement effect of communications, Rogers' account based on empathy and the Freudian explanation based on interpretation.

What makes dissonance theory so amenable to the dynamics of self confrontation is that it utilizes such terms as expectancy, committment, self-ideal and even such non-concepts as awareness and consciousness. The dynamic of self confrontation counseling lends itself much more easily to such concepts (than to traditional terms); and while the above concepts have had trouble in the past finding a home in the behaviorist vocabulary, they are gaining in psychological respectability (Krathwohl et al. 1968; Zimbardo, 1969). Thus the reality of such a concept as "expectancy" has been demonstrated by Pribram (1969) electroneurally and psychophysiologically as well as behaviorally.

Dissonance and Self Theory

As pointed out by Boyd and Sisney (1967) there is much theoretical and experimental support for the hypothesis that the

degree to which the self is misperceived is highly correlated with behavioral or psychiatric disorders (Rogers, 1951). They cite Machover (1951), Swenson (1957) and Montague (1951) for their hypothesis that schizophrenic or neurotic inpatients have markedly disturbed body concepts, and particularly in interpersonal contexts (Sullivan, 1954). Boyd and Sisney then use dissonance theory to predict that when schizophrenic or neurotic subjects are confronted with an accurate and realistic recording of their own behavior (a video tape recording) there will be set up a dissonance between their distorted self-image and the more accurate one, and thus there will be a shift of the S's self-image in the direction of increased reality, or with less likelihood, a distortion of the perceived recording. Making the distinction among "self concept," "ideal self," and "public self" (or, oneself as others see one), Boyd and Sisney found that following self confrontation via video tape all three of the above concepts become less discrepant with each other, the self concept and ideal self moved closer together, as did the self concept and the public self.

In such studies there are different ways in which the subjects can resolve the attendant dissonance. They may deny what they see, misperceive or distort it, ridicule the source of the dissonance arousing communication, or they may change their behavior. The former means of reducing dissonance will be touched upon in a later section of this review; as for the

latter (behavior change), change may occur in different ways: a subject, when faced with a different image of self than the one he has been presuming, may either change his self concept, or he may change his idea of what he ought to be; further, faced with an image of self from others which is discrepant with his self-image, he may either change his self-image or he may work on others to make them change their view of him. Available studies indicate that in situations where the self concept varies with one's ideal self, then it is the self concept which tends to change; and in situations where the self concept is at variance with the public self (others' view of the subject), again it is the self concept which tends to change.

Self Concept and Behavior Change

Thus Moreno (1946), in the context of psychodrama, suggests that the role taking which takes place on the stage is a process by which the self is permitted to express itself as spontaneously and fully as possible. He has a sounding board in the audience, in the therapists, in the alter egos (others playing his role), so that he can see and feel himself and his impact -- and thus see the self he projects and compare it with the self he thinks he projects.

One of the earliest studies, a descriptive study by Cornelison and Arsenian (1960), indicated that even psychotics, when confronted by an image of self, without exception recognized themselves; in

all cases there was recognition, and in some cases manifest shock. The authors suggest that such self confrontation (which consisted of showing the patients pictures of themselves) focuses perception upon an external image of self, and that this may bring a psychotic individual into better contact with the realistic self. Their theoretical explanation for this is that in psychoanalytic theory psychosis is a withdrawal of libido from the world of external objects, and the photograph of self may be a means of redirecting libido outward. The authors suggest that there may be individual differences which affect patients' reaction to pictures of self; further, that such self confrontation may be a desirable adjunct to therapy with such disturbed persons.

An exploratory study by Walz and Johnston (1963) indicated that counselors seeing themselves with clients on video tape tended to become less positive in their rating of self and more in agreement with the supervisor's rating of them. Also, counselors with the high anxiety scores showed the greatest tendency on a posttest to move toward congruence with clients and supervisors' ratings of them. This would agree with the suggestion made by Stoller (1968) that much energy is invested in living the discrepancy between the way one sees oneself and the way he thinks others see him.

A study with sixth grade students by Cole et al. (1963) also indicated that when shown movies of themselves in the classroom,

together with a discussion of the positive aspects of the movie sequences of themselves, sixth grade students tended to change their self concept to be more in line with what they saw on the film than did two control groups (one had movies taken in the classroom but was not shown them until after the experiment; the other classroom was not filmed at all).

An extremely important pioneering work was that of Nielsen (1964): Studies in Self Confrontation. His self confrontation studies were part of a complex and exhaustive program of research on a group of students at Harvard. In this particular phase of the study the students were shown movie sequences of themselves made when they were engaged in a highly stressful and involving situation that demanded a defense of their personal philosophy of life. This self confrontation "created a unique responsitivity in the subjects in regard to their self image, a willingness to associate with it, and a particular interest in understanding themselves...The self confrontation furnished the subjects with a unique opportunity for gaining self insight. Sometimes we say that a person must see himself as others do in order to get a true insight into his own nature." Nielsen cites the work of Carrere who used this method of self confrontation in treating alcoholics. Jean Carrere (1954; 1955; 1958) presented to the subjects pictures of themselves made when they were drunk. His purpose was to present to the patient a true image of the sickness of alcoholism and thus help him break

through his barrier of resistance to reality. The patients had been filmed while undergoing delirium tremens, and the films were shown to the patients after they had recovered from the acute stage. The result of the treatment was a noteworthy rate of success compared to the success of standard methods of treating alcoholics.

In a study of 80 patients of varying diagnostic categories Moore, et al. (1964) attempted a controlled experiment to follow up on the results suggested by Cornelison and Arsenian. The authors found that treatment subjects improved as compared with non treatment subjects; improvement was defined in terms of ratings by independent observers. The results of this study seem to correspond fairly closely with the account given by Boyd and Sisney (1967), that the self image and the public self are less discrepant with a realistic image of self after self confrontation.

A study by Ward and Bednak (1964) indicated that psychiatri patients who were shown photographs of themselves and who had interviews which focused on the details of the photographs, showed significant differences from patients who either did not have the photographs shown to them, or who did not have the interview, or who had neither. The criterion was the Patient Activity Checklist (PAC) -- a time sampling measure designed to rate the appropriateness of patient behavior in a free ward situation. Again, in the present review, this criterion

measure is understood to be a measure of the "public self" as that term is used above (Boyd and Sisney, 1967).

Similarly, Geertsma and Reivich (1965) found that through repetitive self observation a neurotic patient showed substantial change toward a more realistic view of self; the criterion used was a comparison of the subject's own ratings and the ratings of a number of student nurses.

Truax, Schuldt, and Wargo (1969) working with juvenile delinquents, psychoneurotic outpatients, and hospitalized mental patients, addressed themselves specifically to testing the hypothesis that changes toward congruence between self concept and one's ideal self are more related to change in self -- rather than in ideal-self concept. They found that the hypothesis was supported in the first two populations, but not in the third (hospitalized mental patients); no reason is given by the authors for this. It is important to note that this study did not involve "self confrontation" defined as video tape feedback, showing of photographs of patients to themselves, etc., but psychotherapy alone. Nonetheless the study is relevant enough to the present question to merit its mention.

Lantz (1967) found that in experienced teachers both their self concepts and their ideal teacher concepts changed after experience in teaching. Though this does not contradict the main thrust of the above studies it does qualify it; specifically it suggests that in assuming certain professional roles, one's

concept of the role itself may change when one is actually experiencing oneself in the role (Fuller, 1968; Newlove, 1969).

Finally, in two related studies (Winter, Griffith and Kolb, 1968; Kolb, Winter and Berlew, 1968) investigators found that successful self directed change occurred in two groups of industrial management graduate students as a function of (1) commitment to their goal, and (2) feedback from others in a group. Theoretically, the authors base themselves on dissonance theory literature, (Brown, 1965), feedback and information literature (Frick, 1959; Miller, Galanter and Pribram, 1960) and state that successful self directed change is motivated by awareness of the cognitive dissonance created when an individual commits himself to a valued goal that he sees as different from his present behavior. Though this was not a study made to test whether it is the self concept or the ideal-self which changes, nonetheless it suggests, along with the other studies cited above, that when dissonance occurs it is resolved by the movement of the self-concept rather than vice-versa.

Confrontation in Therapy

Almost all the studies we have cited thus far would tend to substantiate Clothier's remark (1966) that an individual must "perceive a difference between his behavior and the demands of the present situation before he can reorganize his perceptual framework. When this reorganization occurs, the individual will

most likely be able to change his behavior and thus learn from experience." That is, there must be feedback to an individual on his performance; of itself feedback is not enough -- there must be highlighting or cueing or reinforcement of some kind. Both the research done with a more behavioristic bent ("shaping", behavior therapies), and those studies done with a more cognitive orientation -- particularly those done with some kind of dissonance model in mind -- bear out the above. As most of the studies which have to do with "self confrontation" either consciously or unconsciously follow the latter model, most of the research cited has been in this vein; research involving "shaping behavior" and generally any other studies done involving reinforcement/feedback are cited only when they controvert, qualify, or highlight research from the chosen area.

Now, from still another area of research, studies done relative to the most effective therapeutic conditions for client change seem to substantially corroborate, partially explain, and elaborate on some of the conclusions from the preceding. Though many studies have been done on the Rogerian account of progress in therapy -- particularly on the variables of therapist empathy, genuineness, respect, concreteness and self-disclosure (Truax, 1963; Truax and Carkhuff, 1965) and some have thought of these variables as the necessary and sufficient conditions of client change (Rogers, 1958), there is some evidence which suggests that within these facilitative conditions there is often hidden

another variable critical to client change in behavior. This other variable is called "confrontation" by Anderson (1968; 1969) and, as quoted above, is defined by her as "an act by which the therapist points out to the client a discrepancy between his own and the client's way of viewing reality." Anderson's two studies indicate that "high therapist levels" (i.e. as measured on the Carkhuff and Berenson scales of empathy, positive regard, genuineness, and self-disclosure)when joined with confrontation, were followed by increased client self exploration to a significantly greater degree than when there was confrontation under low levels of therapist activity. There have been no studies done to test whether "high levels of therapist activity" without confrontation are as effective as such high levels of therapist activity with confrontation, though a study by van der Keen (1967) indicates that there was no relationship between successful therapeutic movement by the client and level of counselor activity; there was, however a relationship between the level of process (i.e. client self-exploration) and successful therapeutic movement by the client. Thus, although this study did not specifically investigate the above problem, it indirectly indicates that it is possible to have high therapist activity and no client change (and, presumably, no confrontation).

What is important to the present review is the isolation of this "confrontation" variable, not only by Anderson but by

others (Collingwood and Renz, 1969), and its obvious closeness to the lines of research discussed above, particularly dissonance theory research. Stated simply, the conclusion of present research seems to be that therapeutic progress occurs when both facilitative conditions (positive regard, etc.) and confrontation occur. A study by Muehlberg, Pierce and Drasgow (1968) intercorrelated scores on the facilitative conditions of empathy, positive regard, genuineness, concreteness and self disclosure and found that one single factor accounted for practically all the conditions. Hence, besides there being an indication that indeed confrontation and "empathy" (understood as encompassing the above 5 conditions) are separate variables, there is an indication that these facilitative conditions are in fact one condition.

Staines (1969) offers a selected survey of the relevant research on how communications from a therapist influence the verbal behavior of clients. He compares four traditional approaches: Roger's account based on empathy, Freud's views on interpretation, the operant emphasis on the reinforcemen~ effect of communications, and cognitive dissonance theory's focus on discrepancy. Staines points to a substantial agreement among these four positions on the following points: in matters attitudinal dissonance theory would predict a curvilinear relationship between attitude change (client progress) and communicator discrepancy (therapist discrepancy from the client's

own position). The work of Harway (1956) and of Raush et al. (1956) indicates that just such a relationship holds in studies relative to therapy. In matters nonattitudinal (e.g., client self exploratory statements) the depth of therapeutic interpretation (or AE -- accurate empathy, in Rogerian terms) categorized as low, moderate, or deep is seen to be closely related to the potency and direction of therapeutic reinforcement. In other words, shallow or deep interpretation tends respectively to act as reinforcing or aversive stimuli for client verbal behavior. Two major studies cited by Staines (Bergman, 1951; Speisman, 1959) bear this out; further in the latter study particularly, a moderate level of interpretations was seen as the most effective in raising and maintaining levels of client exploration. Thus, again, there is a curvilinear relationship between client exploration (client progress) and level of interpretation. Where interpretation is shallow, e. g., mere reflection of client statement, there is minimal reinforcement. Where it is too deep, such interpretation acts as an aversive stimulus and the client is "halted in his tracks." The most effective reinforcer is that which goes beyond mere reflection but which is not as deep as depth interpretation; interpretation, in other words, which makes explicit what is implicit in what the client is saying.

Staines is cited at some length because his review and theoretical account summarizes much of the present reviewer's

findings. Further, his breakdown of the models of research in this area as "operant-reinforcement" and "disscnance" has influenced the present reviewer's outline of this article and is felt by him to be an indication of basically different approaches to research and thus different ways of utilizing a new process such as video tape feedback. Other studies are in substantial agreement with Staines' findings. Thus Bergin (1966) states: "it should be noted that the technique of 'moderate interpretation' (Speisman, 1959), which derives from the analytic tradition, has potential therapeutic significance. Its definition is very similar to that given for 'good' interpretation by various analysts (Fenichel, 1941) and is related to productive patient self exploration." It consists of responding to client affect just below the surface and labeling, identifying, or emphasizing it. If one looks carefully at the definitions and operations for identifying accurate empathy and moderate or good interpretation, it is very difficult to distinguish between them. Similarly Spilken, Jacobs, Muller and Knitzer (1968) in their description of therapist personality variables related to client progress state as the factor most related to therapeutic skill the therapist's ability to put into words what the client is feeling at the moment. Thus for variable number seven of their list "empathy: understanding" they state: at the high end of this scale, the therapist imposes his understanding before the patient is ready to accept it; that

is, his interpretation is too early or too deep. At the low end, the therapist is insensitive to patient cues and lacks understanding, or is only partially aware of what the patient is trying to say. At the midpoint the therapist comprehends implicit or latent meanings, and is able to place them in context. His communications are both accurate and appropriately timed. This factor seems most related to the concept of therapeutic skill"; and in the connection the authors cite Bergin, quoted above.

Whether one posits the act of confrontation as a variable distinct from "high facilitative conditions," as does Anderson (1968; 1969) or whether one sees it more on an interpretation-continuum, as does Staines (1969), one can ask why the act of "confrontation" is a sometimes necessary condition of client change in therapy. Anderson states the reason as follows: "confrontation can provide the therapist with a vehicle for expressing his real thoughts and feelings the moment they are appropriate. It provides a model to help the client learn to accept and express his own thoughts and feelings, and to test his perceptions against another person's 'reality.' Through confrontation the client experiences the fact that there is more than one way of viewing a person or situation, and he learns that two persons may disagree without harboring hostile feelings for one another. And finally, constructive confrontation gives

the client an honest and immediate experience of himself. He feels the impact he can have on another individual and begins to realize his impact on himself, which in effect is a movement toward self confrontation, the ability to face oneself honestly without need for guise or delusion.

Confrontation also signals to the client a measure of respect for his increasing capacity for self determination. The therapist is not handling him with kid gloves (as so many others have done) for fear of overwhelming, hurting, or shaping him. By directly communicating his own position to the client, the therapist allows or prompts the client to make his own stand clear and to evaluate it against the therapist's viewpoint." (Pages 415-416.)

Stoller (1968), and C. A. Rogers after him (1968), make the distinction between discrepant and non-discrepant feedback in their discussion of working with clients who have seen video tapes of themselves, and this distinction seems relevant in that their discussion of these processes gives an indication of when "confrontation" is a helpful process, and when it may be a harmful process. Discrepant feedback refers "to that behavior seen on the video tape in which there is a marked discrepancy between the response the person wishes to elicit and that which his behavior actually would appear to evoke"; and non-discrepant feedback refers "to that behavior, as seen on the video tape, which is congruent with the anticipated responses." The former

would seem to refer to incongruency between one's self concept and one's public self (in the language of Boyd and Sisney (1967)) and the latter would seem to refer to congruency between one's self and one's public concept. Stoller suggests that discrepant feedback is relatively disturbing to an individual watching (receiving feedback about) himself and often results in a disruption of behavior in that the individual becomes highly conscious of what he is doing and hence cannot perform as smoothly as he had previously; such interruption is necessary however if he is to change behavior. Nondiscrepant feedback on the other hand is highly supportive and reinforces the behavior being shown. Stoller further suggests that stressing discrepant feedback to the neglect of nondiscrepant can be a serious mistake. The latter is particularly helpful for the individual with extremely low self regard, and in reinforcing change once it has occurred.

Confrontation as a Stressful Experience

It has already been known that feedback/interpretation can be aversive stimulus (Staines, 1969; Truax, 1966b); that messages can be too threatening for a person to accept (Janis and Feshback, 1953); that a threatening message can be heard if the threat can be reduced because of the presence of a solution -- the degree of threat being inversely related to the adequacy of the solution (Janis and Feshback, 1953, Janis and Terwilliger, 1962, Nunnally and Bobren, 1959); that when threat is greater than can be

handled by the proposed solution, threatening messages are misperceived, distorted and belittled, and forgotten by the recipients (Janis and Terwilliger, 1962); that once the threatening message -- and sometimes its source -- has been so derogated, the message is often less effective in changing attitudes and behavior than a more restrained, less threatening approach (Berkowitz and Cottingham, 1960, Goldstein, 1959); and finally that while communicator credibility will lead to a change-of-opinion change for subjects in an experiment who are undergoing low stress, for subjects undergoing high stress opinion change will not be affected by communicator credibility (Sigall and Helmreich, 1969).

The method of feedback termed self confrontation via video tape can be intensely involving (Nielsen, 1964; Geertsma and Reivich, 1965; Kagan and Krathwohl, 1967) for psychiatric inpatients it was unpleasant and harrowing (Moore, Chernell, and West, 1964); applicants for a job who role played themselves derived no benefit from the experience because, in the opinion of the experimenters, the experience had been too anxiety-producing (Logue, Zenner and Gohman, 1968). Participants in a nude marathon encounter had highly negative expectations of themselves when they were about to view themselves on video tape (Lawrence, 1969; Bindrim, 1969). And for some of the subjects in Nielsen's studies, the experience of viewing themselves was either so embarrassing or threatening that they did not look at themselves on the screen (Nielsen, 1964).

On the other hand, there are studies involving subjects seeing themselves in which such stress or anxiety is not mentioned or involvement is not mentioned, for example almost all the studies done in microteaching. Similarly, in the studies which involved the subjects' viewing of photographed images of themselves, such anxiety or involvement was not mentioned (e.g., Cornelison and Arsenian, 1960; Miller, 1962). On the other hand, patients (alcoholics) who were to "confront" themselves via a test interpretation experienced threat, trepidation, uncertainty -- though this was by way of anticipating rather than in the actual experience (Canter, 1969).

Why is there such threat or involvement in the viewing of oneself on film or video tape? Is there more, say, than in viewing photographs of oneself, or of receiving information about oneself which is threatening, or a blow to one's concept of self? Secondly, why are some confrontations ego-involving and perhaps threatening and not others? In answer to the first question all the available research indicates that there is more threat in viewing filmed or video taped presentations of self than receiving information about self from another medium. But as to <u>why</u> this is so, there is more speculation than data.

Both Nielsen (1964) and Stoller (1968) suggest that viewing oneself on video tape is a means of seeing oneself in interaction with others that is available in no other way; thus the subject confronts himself in a <u>new</u> way. Stoller further suggests that

this is due to (1) the selectivity of the film or video tape: that is, out of the myriad stimuli which we by habit integrate in accustomed ways, the video tape or film captures and focuses on certain selected behavior which we then have to focus on. Such selectivity is increased by the use of zoom lens. (2) Isolation of action against a background: the subject not only focuses on a behavior, but on behavior as separated from the context in which the individual experienced it. (3) Intimacy as Hall (1959) points out, there are culturally determined distances which people find comfortable in face to face contact. Thus on a film or tape one may confront himself in much closer proximity than is normal. Thus, in a sense, a whole new context is created: the quality of the original observation is changed so that what is being viewed is not necessarily what had been experienced.

Another line of speculation is that of May (1950) and Harvey, Hunt, and Schroder (1961). Though these authors were discussing self as a source of anxiety and were not addressing themselves specifically to the filmed or video taped self, their speculation (and an experiment done by Schumacher (1968) to test their theory) has particular relevance to the self confrontation situation. Basically the theory of May and of Harvey et al. states that one effect of anxiety is breakdown of discrimination between oneself and one's environment. This anxiety is greater the closer it comes to concepts highest in

one's conceptual system. It follows that since the self is highest in one's conceptual system, then the introduction of anxiety might lead to a distortion of the self as a construct separate from the environment and to the attachment of anxiety, which is generated by external sources, to the self. Then the self would become an objective source of threat: in other words one would expect that externally generated anxiety becomes attached to representations of the physical self, confrontation with which was negatively reinforcing.

To test this Schumacher, et al, set up a situation where (if the above were true) an individual would be expected to react under conditions of anxiety to representations of himself in a manner similar to that observed when negatively affective stimuli are presented at sub-threshold speeds in perceptual defense studies. Their hypotheses were (1) that Ss under induced anxiety conditions react to photographic representations of their physical selves as threatening; (2) at close to awareness (slower) exposure speeds, a defensive pattern results in greater underestimation of frequency of appearance of self photographs for anxious subjects than for controls.

The results support both hypotheses, and the results lend credence to the concept of anxiety as a phenomenon which distorts an individual's awareness of himself as a thing separate from his environment. Thus, the underestimation by subjects of the number of pictures presented at a slow speed (i.e. the anxious individuals'

not perceiving themselves clearly at a near-threshold level of awareness) was interpreted by the experimenters as indicating that a distortion is present which is apparently the result of attributing the feelings of vague discomfort associated with anxiety to their objectified selves. The control subjects and the experimental subjects both overestimated and underestimated the frequency with which their pictures appeared, but while the experimental subjects overestimated at the fast speed the controls overestimated at the slow speed of picture presentation; and while the experimentals underestimated at slow speed, the controls underestimated at rapid speed the frequency with which their pictures were shown. Thus the authors reasoned that "for anxious subjects the clearer confrontation of self at the slow speed functioned as a negative reinforcer, leading to underestimation. At the fast speed, the opposite would be true. That is, failure to achieve a recognition of a self-photograph would function as a negative reinforcer for the non-anxious subjects and result in underestimation, while functioning as a positive reinforcer for anxious subjects." Such results and interpretation are in agreement with Blum's findings (1954) and other investigators for recognition of self and self products (Huntley, 1940; Wolff, 1948). The relevance for self-confrontation techniques is clear: in a situation where a viewer of self is in a state of anxiety the sight of self can be more anxiety producing. We can surmise that where the

representation of self is itself poor, or where the subject is placed under greater stress by those viewing the film or video tape with him or her, then the objectified self is that much more anxiety producing.

To sum up: the available literature indicates that indeed self confrontation feedback can be a stressful, anxiety producing experience, that the objective representation of self can be more anxiety producing if the subject is already anxious, and that a video tape or film representation of self involves a selectivity and focusing on self that makes such a feedback experience quite different from other representations of self. There is no reason to believe that such stress and anxiety as may arise in such a self confrontation experience would not cause the same inhibiting effects that threatening messages have been known to cause.

The over-all conclusion for the last two sections is that confrontation, to be successful, should be done in a situation where the subject feels basically secure, is not threatened more than he can handle, where he can trust the therapist (supervisor), and feels that the other understands and has positive regard for him/her. When the confrontation session is one which involves a teacher, counselor, or some other professional person, it is desirable to create a situation "psychological safety," not-for-keeps situation, which is still close enough to the real teaching (counseling,etc.) situation

so as to make for personal learning. Thus, it is similar to the "unfreezing" phase of the change process as described by Schein (1964), the psychological safety situation as described by Miles (1959), similar to low risk situations such as scrimmage in football, brainstorming, client centered therapy. And within this situation of psychological safety how much dissonance the "other" wants to create in the subject is a function of how ready the subject is to receive it, how badly the subject wants to change (if at all), what change goals the "other" has in mind for the subject, and finally, how well the "other" understands the subject and communicates that understanding (both affectively and cognitively) to the subject.

What Klein says of confrontation in inducing change in large complex organizations is applicable here. "Hidden dynamics are exposed, defenses are nudged (if not assaulted), anxieties are raised, resistances are manifest, and there would appear to be required in confrontation -- as in training generally and in psychotherapy -- a considerable and careful working through of material that is internally relevant to the consultee (or patient) system and material that pertains to the consultant-consultee (or therapist-patient) relationship... Surely, from this account it must be clear that confrontation, to be effective, must be carefully and expertly embedded in a larger and extended context of relationships." (Golembiewski and Blumberg, 1967).

This "larger and extended context of relationships" is probably the single most important variable factor in reducing the stressfulness of a self-confrontation situation. Thus Goldstein, Heller and Sechrest, in their work Psychotherapy and the Psychology of Behavior Change state that the major variable in any therapy relationship is client attraction toward the therapist; and their first and major hypothesis, backed up by a wealth of data, is that "by heightening the favorableness of patient attraction toward his therapist, to that degree does the patient become more receptive to therapist influence attempts." (Goldstein, Heller and Sechrest, 1966). It follows that the converse of this is that if the client is not attracted to his therapist, then to that extent does therapy become ineffective. Though this is not an essential element of self confrontation (i.e. something which sets it apart from normal therapy) nevertheless the lack or overlapping of it can render null and void the otherwise beneficial effects of such an experience.

Also, in one of the pioneer studies involving self confrontation Nielsen points out that research at the Harvard Clinic is purposely done in an atmosphere of friendliness, where the experimenters come to know the subjects they are working with and establish rapport with them. In Geertsma's and Reivich's (1965) study reporting the results of repetitive self observation by video tape feedback of one subject, they

state that "the subject's relationship with the therapist was a critical factor in determining what she would do during the playback sessions."

Work of Jourard and his associates indicates that certain populations are more inclined to disclose information about self than others (e.g., women were higher total disclosers than men; mothers were more confided to than fathers; among females there is a significant correlation between mother- and father-cathexis and the amounts disclosed to them). The finding most relevant to our review is Jourard's finding that for structured dyadic relationships among colleagues, if S had disclosed much and knew much about a colleague, the other knew much about and had disclosed much to her. Also, not unexpectedly, there was a correlation with the above and liking for such a colleague. (Jourard and Landsman, 1960; Jourard and Lasakow, 1958; Jourard, 1959). The above held true especially for females; the relationship of self disclosure and knowledge about a peer held true for men also, but liking was only slightly correlated with self disclosure.

At the beginning of this section we asked two questions. Why is there such threat or involvement in one's viewing oneself on film or video tape? This question has been answered to some extent. Why are some self confrontation situations involving or threatening, and others are not? Though no research has been done to test such a broad question, the answer from the

foregoing seems to be that the involvement, or even threat, comes from how much of "self" has been invested in the video taped experience. Thus, not surprisingly, it is from those experiences in which a subject must defend his philosophy of life against an attacker (Nielsen, 1964); in which one bares himself not only psychologically but physically (Bindrim, 1969; Lawrence, 1969); wherein one is putting himself and his professional skills on the line (Walz and Johnston, 1963; Thoreson, 1966); in which a client engages in therapeutic interaction with a counselor (Geertsma and Reivich, 1966) -- that we hear reported such terms as stress, anxiety, involvement etc. On the other hand, those studies not focused on the person or the self as such, but rather on some peripheral aspect of self, bypass all matter having to do with "self confrontation" or at least do not seem relevant to the task at hand. Such studies include motor skill (Smith and Clifton, 1961), fairly uninvolving teacher skills such as "focusing on chalkboard," "writing," "underlining," etc. (Young, 1969), and, in brief, those studies concerned with the effectiveness of teaching specific behavioral skills by modeling/cueing and then having the subject compare himself with the model on a specific skill. One might surmise that some of the surprise or shock or discrepancy which we have described might accompany many subject reactions in these studies. But just as no cueing leads to looking for nothing in particular, so also does cueing on a

specific behavioral objective lead to no confrontation with self. In a sense the subject is given a set toward what is expected and how to perform. Any "confrontation" with self is at best muted because it is seen as irrelevant to the task at hand. Finally, as such "confrontation" as described above is irrelevant to the experiment, so is it irrelevant to the experimenter; hence, even if it does occur it is probably not pointed out in such studies.

Individual Differences (Personality Variables)

There are two personality variables that are seen as significantly affecting the self-confrontation experience. One is the self concept itself. The other is a cluster of variables that include dogmatism, authoritarianism, close-mindedness, etc. (A sub-category of the above is anxiety -- in that dogmatism/authoritarianism has been commonly thought to be a cognitive network of defense mechanisms to handle an individual's anxiety which he otherwise could not cope with (Rokeach, 1959; Adorno et al., 1950).)

The present review does not intend to review research done in the area of the self concept generally. That has been done elsewhere and there is no need to repeat or summarize such research here. What the present review is interested in is the research studies where results indicate (1) that subjects with high and low self concepts will tend to act in accordance with

their self concept, and (2) a low self concept reduces the probability of experiencing dissonance between present behavior and future valued goals.

That persons will act in accordance with the self concept is a postulate of self-theory (Rogers, 1951; Combs and Snygg, 1959). Recently investigators have found that by simply manipulating self concept (by giving the subjects fake personality tests) they can influence subjects to engage in the kind of behavior that the self concept suggests. Thus, in one experiment (Aronson and Mettee, 1968) if subjects were led to believe from fake personality tests that they had a tendency to certain kinds of immoral behavior, when the subjects were placed in a situation where they could engage in immoral behavior (cheat), those who were given the "low self concept" personality tests cheated significantly more than those who were given the "high self concept" personality tests. Two corollaries seem to follow from the above (a) that if a manipulated self-concept can cause such differences in behavior, then a consistently high or consistently low self concept must determine behavior that much more powerfully; and (b) persons in a position to give authoritative feedback can have a significant impact on persons who are receiving such feedback; this of course has been known, but the above experiments illustrate how immediate such impact may be -- at least in some areas of behavior.

That a low self concept reduces the probability of experiencing dissonance between present behavior and future valued goals is the conclusion reached by Winter, Griffith, and Kolb (1968). In their study it was found that change in business school students was found to be related to the individual's commitment to his goal change, and to the amount of feedback he received from other group members. Improving the change method to increase goal commitment and feedback increased the percentage of students successfully attaining their goals from 5% to 61%.

A content analysis of self description essays revealed that (a) high change Ss more frequently stated goals, with implicit recognition that the goal had not yet been attained (b) low change Ss more frequently described themselves with little recognition of alternative possibilities (c) low change Ss showed more tentativeness and uncertainly about themselves ("identity diffusion"). The results were cross validated in a second study, and suggest that successful self directed change is motivated by awareness of the cognitive dissonance created when an individual commits himself to a valued goal that he sees as different from his present behavior.

The authors state that "The low change subject's concern with defining 'reality', his sense of playing an artifical role, his vagueness about how he is perceived by others, and his indecisiveness about his own thoughts and actions appear to be

incompatible with successful self directed change." Thus it seems that discrepancy between what one is and what one wants to be is motivating only if the individual feels within himself the competency/power/energy to reach his goals and sees the way how. This is in line with dissonance theory (Brehm and Cohen, 1962; Festinger, 1957), with Erikson's work on identity diffusion (1959). Further, the high correlation between subjects in the Winter, Griffith and Kolb study who experienced little dissonance between self concept and ideal self and the dogmatism scale lead the authors to speculate that dogmatism influences the individual's inability to articulate to the self discrepancy in his life (Winter, Griffith and Kolb, 1968). Canter (1969) indicates that in a group of alcoholics, both males and females, willingness to hear information about self in a test interpretation (willingness = asking for an interpretation) was correlated with higher scales on the CPI relating to maturity, ego-stability, sense of well being and achievement aspirations. Hence Canter suggests that "if higher scores on the CPI scales can be interpreted as reflecting greater ego-strength and 'better adjustment' in general, it is evident that (subjects) who have this higher ego strength are more willing to submit themselves to an unfamiliar and potentially threatening 'psychological' treatment situation than those with lower ego-strength." The importance of self-image, particularly the relationship between self-image and behavioral or psychiatric

disorder, has already been noted (Rogers, 1951; Boyd and Sisney, 1967). The latter study demonstrated the close relationship between self image and self concept (Cfr. also Nielsen, 1964, in this regard). Two recent studies, reports of nude marathon encounter groups, underline further the relationship between self-image and self-acceptance, particularly via the highly involving medium of video taping (Lawrence, 1969; Bindrim, 1968, 1969). Thus Bindrim concludes in his report on a nude marathon encounter group that "self acceptance in many cases is associated with body image." Though there is not much experimental data to support the above, it is in line with self-theory, and with the work by Boyd and Sisney (1967) cited above.

Authoritarianism and Dogmatism

Another important personality variable that interacts with the stress of self confrontation via video tape (along with low self concept and poor body image) is called by various names of dogmatism, closemindedness (Rokeach), authoritarianism (Adorno et al.). This latter is considered by some to be only one kind of "dogmatism," the more general term (Rokeach, 1959).

The earliest formulations of Rokeach linked anxiety and a personal belief system as a cognitive net of defense mechanisms to protect oneself and that is highly resistant to change. A number of experiments and studies have confirmed the basic formulation of Rokeach (Erlich, 1961 (a), 1961 (b); White and Alter, 1967; Hallenbeck and Lundstedt, 1966, Druckman, 1967) but

enough conflicting evidence has accumulated for Erlich and Lee (1969) to suggest a qualification of the original theory. This reformulation stresses the importance of intervening variables between belief change and open- and close-mindedness. These five variables are (1) the authority source of the new beliefs, (2) the syndrome relevance of their mode of communication: i.e., whether the mode of presentation is more attuned to open- or close-minded persons, (3) the belief congruence of new beliefs, (4) the novelty of new beliefs, and (5) the centrality of new beliefs to the individual.

The above variables are obviously relevant to our present review -- as the most critical belief system a person has is at stake (self concept), and the most direct undeniable presentation of (potentially) discrepant information possible is at hand (view of self on screen, in many studies engaged in a task that is highly "ego involving").

While the relevant research is suggestive only, it does indicate that under conditions that involve tasks of high centrality closed-minded subjects tend to become more constricted and conceptually less differentiating in their use of categories (White, Alter, and Rardin, 1965). Also, in a test to determine whether more central beliefs are more resistant to change, Rokeach, Reyher, and Wiseman (1968) reported that, as predicted, the relative order of change involving five levels of centrality was from most central to least central/most

peripheral (i.e. where A represented the most central beliefs, B next in centrality, etc, it was found that A > B > C > D > E, where p. = .008).

Perhaps the general conclusion that is most relevant to our review of confrontation literature is that there are some studies which indicate that dogmatism plays a significant role in the learning process, by sensitizing the individual to certain content according to the manner in which it is presented. Just what this means in the concrete is not entirely clear. One study is illuminating in this direction, that of Kaplan and Singer (1963), in which they substantiated their hypothesis that the varied behavioral patterns of dogmatism reduce the sensory acuity of high dogmatics which results in reduced self awareness. It was concluded by them that "openness to sense impressions apparently runs parallel to openness to ideas, willingness to examine them critically, and careful analysis of thought." (p. 490)

Though it is not indirectly related to the present review, the question of what kinds of defenses the high dogmatic individual uses is germane here. Thus, in a study by Hallenbeck and Lundstedt (1966) high dogmatic individuals who became gradually blind were found to utilize denial and repression; but high dogmatic individuals who experienced sudden blindness did not display denial mechanisms. Other studies (Byrne, Haylock and Goldberg, 1966; Bernhardson, 1967) employing the repression-

sensitization scale, developed to measure differing kinds of defense mechanisms, found that dogmatism was associated with sensitizing rather than repressing defenses. See also Byrne, Blaylock and Goldberg (1966) for a comprehensive review of the literature prior to his construction of the scale.

In their review of dogmatism, Vacchiano, Strauss and Hockman (1969) indicate the balance of research on the contention of Rokeach that the high dogmatics should reveal less tolerance (and more anxiety) for belief-discrepant information is in Rokeach's favor -- that dogmatic individuals will be more threatened by and avoid exposure to belief-discrepant information than non-dogmatic individuals. Perhaps the most relevant study is that of Tosi, Fagan and Frumkin (1968a, 1968b) who found that high dogmatics differed significantly from low dogmatics with respect to the extent to which they perceived a group personality-testing situation as threatening.

In a study mentioned above (Winter, Griffith, and Kolb, 1968) the authors found that, contrary to prediction, high and low change score subjects were not significantly different on the dogmatism scale. However, they did find a positive correlation between those subjects with a high DE score (i.e., a score indicating little or no recognition of separation between the ideal and the current self) and a high dogmatism score. They speculate that "close-mindedness" may cut across a number of areas of such individuals' functioning, and that in any case

such inability to articulate clearly differences between present behavior (self concept) and future goals (ideal self) reduces the probability of experiencing dissonance between these two elements; hence, little motivation to change behavior is likely to be present.

In another study (Halverson and Shore, 1969), the authors predicted and found a high negative correlation between self disclosure on one hand and authoritarianism on the other. As predicted, the high authoritarians rated themselves as disclosing less about themselves. The authors suggest that this is consistent with the theory of authoritarianism, that one with a relatively closed belief system acts so as to minimize the challenge to his values and beliefs. Two other variables that correlated highly with self disclosure were cognitive complexity and belief-that-

this lends support to the thesis that (1) because simple inflexible structures for processing interpersonal information are inadequate for dealing with many interpersonal situations, then low complexity persons tend to react more defensively than more complex persons whose information proc ng is adequate to deal with most interpersonal situations a hey can relate in a more open informational manner; and (2) that if a person views human nature as basically good or evil, he will probably behave in a more open and self disclosing way or in a more guarded and defensive manner toward others.

Video and Audio Feedback:

That visual feedback is more effective in producing behavioral change is more often assumed than tested. Studies which have compared the two modes of feedback indicate, however, that visual feedback is more effective in causing change than audio alone. An early study by Gibb and Platts (1950) before the advent of video tape feedback, is cited by Stoller as an indication of how promising a medium video tape is as a feedback device. In their study, Gibb and Platts found that role playing combined with feedback was more effective than verbal feedback alone. In a study which compared the two modes of feedback (Robinson, 1968) the investigator found that "when video tape feedback was given for a particular behavior, the behavior tended to decrease in frequency rather quickly as compared to verbal feedback." In fact the change was so immediate that the author suggests, at least for video tape feedback, "the development of behavioral changes preceding changes in self image." (That such changes can take place prior to changes in self-concept, and/or without "awareness," is indicated by other studies (e.g., Gergan, 1965). It is interesting to note, however, that such studies are all in the realm of what Staines (1969) calls "non-attitudinal changes." It still remains to be seen whether permanent changes in attitudes can be wrought without changing the self concept itself. The weight of evidence would seem to indicate a negative answer.

As to why video tape feedback will be more effective than verbal feedback, at least for most situations, the following reasons seem to hold:

(1) Video tape (or film-) feedback is highly attention-getting, emotionally involving, especially if it shows the self in a highly ego-involving situation or task (Nielsen, 1964; Loggue, Zenner and Gohman, 1968; Thoreson, 1966; Kagan and Krathwohl, 1969).

(2) Video tape feedback allows for immediate and direct feedback. The subject (client) is not as apt to get "tangled up" in his reply to discrepant video information as he often is when receiving such information from a person; there is no need to "explain things away" to a video tape recorder. And similarly, whereas the giver of discrepant or threatening communication is apt to get "tangled up" in his own emotions when delivering the threatening communication (which the recipient may react to hostilely, and the bearer of bad news may be already anticipating the recipient's reaction), there is no such danger with a video tape recorder. In brief, there is no "communication noise" in direct feedback from a VT recorder (Stoller, 1968). And although this does not rule out such a perceived threat for the recipient of counselor/supervisor feedback accompanying the video tape feedback, it would seem to lessen that threat.

(3) Similarly, there is not the analogous problem of either the giver of feedback or the recipient of feedback getting

lost in, or defending, theoretical positions -- as often happens in counseling and other interpersonal communication situations. As Stoller puts it, there is direct "feedback" to a person on his behavior as opposed to "interpretation" (which is often enmeshed in a theoretical position alien to or irrelevant to the recipient)' (Stoller, 1968).

(4) Video tape feedback allows the individual to almost literally "stand outside himself" and, perhaps for the first time, see himself as others see him (Nielsen, 1964; Geertsma and Reivich, 1965; Stoller, 1968).

(5) Video taping allows for constant exact highlighting of minute cues. An incident may be replayed time after time to show to the client or recipient exactly what the counselor/ supervisor means, thus maximizing behavior change through shaping, or through the giving of discrepant feedback, (or the stabilizing of desired behavior by nondiscrepant feedback). And, as Stoller points out in a group therapy situation which involved the use of video tape, even as the person is denying what the giver of information is saying, he may be videotaped in the act of denying and then immediately be shown that video taped incident (e.g. where the individual may be angrily exclaiming that he's not really angry) (Stoller, 1968).

(6) A final benefit of video tape feedback is that the various avenues of the recipient of feedback to reduce dissonance are limited. That is, a person may ordinarily explain away a threatening communication by derogating the communicator,

misunderstanding or distorting his message. Such dissonance reduction techniques are severely limited by the impartial directness of video tape feedback. Hence probability of behavioral change is heightened; a change in self-concept or ideal-concept are the only reasonable dissonance reduction avenues left. In some cases a person may reduce dissonance by simply not looking at his videotaped (or filmed) behavior (Nielsen, 1964).

Programs Utilizing Video Tape Feedback or Self-Confrontation Techniques

At least three programs, each guided by a theoretical position, clearly enunciated, have utilized different forms of the kind of feedback or confrontation-counseling described in the previous pages.

(1) The most well-known and most widely-used methodology is that of microteaching, (Cooper and Stroud, 196). Basing itself on the work of modeling by Bandura and Walters (1963) microteaching attempts behavioral changes in the recipient of feedback by concentrating on cueing, shaping, reinforcing behavior. Dissonance and self concept may be involved, but the emphasis is on shaping behavior in accordance with a model which has been shown. Thus, to teach appropriate questining techniques, a supervisor will show a teacher those techniques(on video tape) as a good teacher utilizes them. The teacher wil then attempt

to model her own behavior after that which she has seen. This modeling behavior will take place in a small simulated classroom situation. She will teach for a limited period of time, concentrating on the one behavior in question; then she will be immediately shown her video tape; discrepancies are pointed out, behavioral changes are reinforced, and she again teaches the lesson; she is once more shown her video tape, and so the process continues until the teacher has mastered a given kind of behavior.

Recently a program of research in counseling has been initiated (Ivey et al., 1968) which is based on the research done in microteaching. Microcounseling is described as "a scaled down sample of counseling, in which beginning counselors talk with volunteer 'clients' during brief five minute sessions which are video-recorded. These scaled down sessions focus on specific counseling skills or behavior. Microcounseling provides an opportunity for those who are preparing to counsel to obtain an amount of practice without endangering clients... Its principal aim is to provide prepracticum training and thus to bridge the gap between classroom theory and actual practice." (Ivey et al., 1968). In several studies utilizing the above described techniques the investigators found that several kinds of counselor behavior, namely "attending behavior," "reflection of feeling," and "summarization of feeling" were all significantly improved in those trainees who utilized microcounseling techniques

as compared with a control group. The authors state that microteaching techniques applied to the training of counseling trainees provide a viable and effective model for counselor education.

It would seem that both microteaching and microcounseling have the same advantages and disadvantages as a research strategy. They are effective means for keying on a specifiable kind of behavior and reinforcing it until the trainee has it in her repertoire of behaviors. Such learned behavior will probably follow usual learning curves (McDonald, Allen, and Orme, 1966). Thus Ivey et al. (1968) talk about the probable extinction of learning in massed-practice study, but the expected rapid rise in such behavior with intermittent practice and reinforcement.

There seems to be more difficulty with microteaching as a technique for producing change, in the areas of more complex behavior and generalization. Thus, it has been found that although teachers learned a given behavior rather well, they were unable to generalize that learned behavior to a new situation. Similarly, as regards more complex behavior, Claus has found that while microteaching techniques helped beginning teachers to focus on specific behaviors to be learned, "cueing on the teacher's own use of higher-order questions, as displayed in the video tapes of their own practice sessions did not prove to be significantly effective" (Claus, 1969).

There are at least three possible explanations of the difficulties of microteaching with higher order complex behavior. One, is that the methods are not developed enough, refined enough to handle such subtle complex behavior change. The second is that if the research based on self-theory is correct (cfr. especially Stoller, 1968), then a person/teacher should for a while become less effective in her behavior after video tape feedback, unless only superficial skills are involved; thus, the deeper one goes into the "personality" of the teacher and the behaviors that are presumed to be somehow tied with the individual's personality dynamics, the more fumbling and ineptness in such behavior if the feedback is effective! In other words, the person has to unlearn one kind of behavior; attendant to this is the gradual change of self concept and, finally, the integration of the new desired behavior. Thus, one could suggest that in the Claus study if she would take a measure 3 or 6 months from the completion of her study, she might find desirable behavior change in the area of higher order questioning. In fact, such a procedure was done in another study (Tintera, no date of publication; as cited by Jensen, 1969). Tintera found that there were no significant differences in performance reported between teachers prepared by video tape and supervision, those prepared by voice tape recordings and supervision and those trained by conventional supervision alone; however, after six months there was some indication that those teachers who received

the video and audio feedback (together with supervision comment) showed superior performance when compared to those student teachers who received only the conventional supervision.

A third possible answer, lined partially with the second, is that if research based self-theory and dissonance theory is valid there would seem to be some necessary change wrought in self-concept before certain kinds of behavior can be changed, primarily those kinds of behavior that can be called "attitudinal" (Staines, 1969). For example, in the Claus study, if a teacher or group of teachers do not consider higher-order questioning behavior as important, or they somehow see themselves as really not very good at this kind of behavior (even after they have successfully done it), then such behavior is unlikely to persist. In other words, this third answer would say with Staines (1969) that in non-attitudinal behavior-change, shaping or modeling behavior will be effective; in the case of attitudinal behavior change it will be less so or not at all. In the latter kind of behavior change the dissonance model, particularly when joined with self-theory, (Brehm and Cohen, 1962; Aronson, 1968; Bramel, 1968) would seem to be a more effective model for producing behavior change.

(2) A five year research effort, the Personality, Teacher Education, and Teacher Behavior Research Project, formally tested effects on teacher personality and teaching behavior of three procedures. These procedures were (a) psychological

feedback (assessment of teachers from psychological counseling); (b) behavior feedback (the use of a teacher's viewing her own teaching film as a stimulus for counseling); (c) situation feedback (special placement in a teaching situation). Changes associated with these treatments were in directions generally conceded to constitute gain. Teachers became more receptive to feedback from pupils, more interesting in their teaching, more imaginative, and more organized (Fuller, Peck, Bown and Menaker, 1967).

Principal flaws in the research derive from the lack of control between the time the students were filmed and the time at which they received feedback. Such differences in delay would seem to constitute different 'feedback' situations (Benne, Bradford and Lippitt, 1964; Stoller, 1968). Also it is difficult to delineate specifically what was attributable to the "behavior feedback" (film-feedback) and what was attributable to the other kinds of feedback. The initial notion that behavior change might be related in simple linear fashion to amount of planned feedback was not supported. Instead it seemed that many variables interacted with treatment, including pretreatment personality, perception of treatment, perception of withholding of treatment, and life circumstances (Fuller, Peck, Bown and Menaker, 1967). In the context of this research a study by Albrecht (1968) indicates that there was more congruence between self-concept and ideal-self for those teachers who received all

three feedback treatments vs. those who received only test interpretation or those receiving the test interpretation behavior feedback. The implications of this study indicate that filmed confrontation was successful for these teachers in reducing the discrepancy between self and ideal only when they were placed in situations which were conducive to their personal growth.

The theoretical basis of the research project, though eclectic, is drawn from research done in psychotherapy, particularly from Rogers (1951),the social learning model of Dollard and Miller (1950), and Harry Stack Sullivan (1954). The basic premises of the research are "(1) the task of the teacher is to maximize experiential learning, i.e., learning which makes some difference in the present experiencing of students. (2) Teachers teach more than intellectual content, so what teachers are may be important. Changing the teaching may involve changing the teacher. (3) Psychological assessment may facilitate quicker and deeper understanding of teachers as individuals. (4) Teachers can change as persons. (5) Therapeutic skills and insights may help facilitate changes in teachers as persons" (Fuller et al., 1969).

More recently the research model within which the above on going research is being carried out has been recast in terms of the "Concerns Model" (Fuller, 1968, 1970). There is strong evidence (Fuller, 1968) that teacher concerns occur in a fairly

regular sequence, or in "phases" and that counseling intervention in the teacher education process can be maximized at certain key periods in the teacher's development. Video feedback counseling is seen as one part, though an integral one, in helping the teacher change her behavior in the direction of superior teacher behavior (Ryan, 1965). Video feedback counseling is most effectively used, these researchers believe, only when it is used in some kind of developmental framework of teacher education such as the Concerns Model or some analogous model (Fuller and Baker, 1970).

Still a third program, to determine the effectiveness of a specific method of using video technology for the solution of counselor and teacher education problems, has been instituted at Michigan State (Kagan and Krathwohl, 1967, 1969; Michigan State University, 1968). The program utilizes a method called "interpersonal process recall" (IPR) and uses video tape playback of various interpersonal situations to stimulate recall of the underlying dynamics involved in an interpersonal interaction. The participants may be therapist-client, supervisor-trainee, etc. Such dyads view the playback of their interaction in separate rooms and are encouraged by interrogators at significant points in the playback to recall feelings and interpret behavior. Parallel reactions are obtained from the participants through simultaneous interruption of the video tape playback.

A variant of IPR was extended to teacher training; its purpose was to confront the teacher trainee via video tape with all those kinds of experiences he/she needs to develop as a mature person and teacher. This included video tapes of self in teaching or counseling situations, and video tapes of situations acted out so that the person on video tape seems to be talking directly to, or interacting with, the teacher trainee viewing the tape (e.g. a hostile pupil), and the trainee has to cope with the subject talking to him/her. the "confrontation" phase of this experience parallels that of watching oneself interact with another, e. g. one's supervisor, on video tape. An important part of IPR is the "interrogator" whose job is basically "to actively push the client for greater specificity and clarity in describing and understanding his feelings and emotions, aspirations and attitudes...to create within the client an intense awareness in depth of his own recorded behavior" ...and to teach "the client how to interrogate himself and how to gain insight into the 'self-confronting' situation afforded by video tape" (Kagan et al., 1967). These functions of the interrogator seem to include both the cueing (or shaping) and the dissonance-arousing functions we have alluded to earlier (Staines, 1969). Primarily, it is the discrepancy between what S thought he/she was saying or doing, and what she wanted others to think she was saying or doing, and what others actually thought she was saying or doing, that provides the insight and

potential growth for S. Though the program generally leans toward affective interaction, in practice the interrogators from an educational background will tend to stress the cognitive aspects of interaction, and the interrogators from a counseling background will tend to emphasize the affective aspects of interaction.

Several studies cited by Kagan et al. (1967) suggest that the IPR was effective in promoting trainee development in four areas (1) becoming aware of the elements of good counseling, (2) becoming sensitive to and understanding a greater amount of client communication, (3) becoming aware of and sensitive to one's own feelings during the counseling session, and (4) becoming sensitive to the bilateral nature of the counseling interaction.

Both the Personalization program at Texas and the IPR Program at Michigan State are more concerned with personality variables and with affective interaction rather than with teaching behavior considered by itself. Microteaching on the other hand seems to accent the more specifiable, behavioral, aspects of the teacher's activity. This is not surprising in that both the programs of personalization and IPR developed from a research done in therapy and the basic research was done by counselors and clinicians; microteaching on the other hand has developed mainly from the social learning theory of Bandura and Walters (1963) emphasizing the influence of imitation and modeling on humah learning and has developed almost completely within an

education context. As previously noted (Michigan State University, 1968), the individuals who interacted with teacher trainees as the trainees viewed video tapes of themselves tended to stress the cognitive aspects of the trainees' performance if they came from an education background, and the affective aspects of the trainees' performance if they came from a counseling/clinical background.

Microteaching has generated much more research than either of the other programs (cfr. Jensen, 1968). This seems to be due to the easily specifiable behaviors with which it is working, the short time span involved in the kinds of behaviors that are desired and achieved, and the easily specifiable nature of the criterion variables. Personalization and IPR are working with the much more elusive and "stable" personality variables. Such variables are more difficult to identify and to find criteria for measuring changes; they also involve a much longer time for behavioral change measurement.

BIBLIOGRAPHY

Acheson, Keith Alan. The effects of feedback from television recordings and three types of supervision treatment on selected teacher behaviors. Unpublished doctoral dissertation, Stanford University, 1964.

Adorno, T. W., Frenkel-Brunswik, E., Levinson, D. J., and Sanford, R. N. The authoritarian personality. New York: Harper, 1950.

Albrecht, I. D. Counseling and self-ideal discrepancy: Effects of counseling, filmed behavior feedback, and the teaching situation, on self and ideal-self discrepancies of prospective teachers. Unpublished master's thesis, The University of Texas at Austin, 1968.

Alger, L. Involvement and insight in family therapy. American Journal of Psychiatry, 1967, 123(11), 1425-1430.

Anderson, Susan C. Effects of confrontation by high- and low-functioning therapists. Journal of Counseling Psychology, 1968, Vol. 15, No. 5, 411-416.

Anderson, Susan C. Effects of confrontation by high- and low-functioning therapists on high- and low-functioning clients. Journal of Counseling Psychology, 1969, Vol. 16, No. 4, 299-302.

Aronson, Elliot. In theories of cognitive consistency: A sourcebook (Eds. R. P. Abelson, Elliot Aronson, W. J. McGuire, T. M. Newcomb, M. J. Rosenberg, and P. H. Tannenbaum.) Chicago: Rand McNally & Co., 1968.

Aronson, Elliot and Mettee, David R. Dishonest behavior as a function of differential levels of induced self-esteem. Journal of Personality and Social Psychology, 1968, 9 (2, Part 11), 121-127.

Bandura, A., and Walters, R. H. Social learning and personality development. New York: Holt, Rinehart and Winston, 1963.

Benne, K. D., Bradford, L. P., and Lippitt, R. The laboratory setting. In L. P. Bradford, J. R. Gibb, and K. D. Beene (Eds.): T-Group theory and laboratory method. New York: Wiley, 1964.

Bergin, Allen E. Some implications of psychotherapy research for therapeutic practice. Journal of Abnormal Psychology, 1966, Vol. 71, No. 4, 235-246.

Bergin, D. V. The effect of dissonant persuasive communications upon changes in a self-referring attitude. Journal of Personality, 1962, 30, 423-438.

Bergman, D. V. Counseling method and client responses. Journal of Counseling Psychology, 1951, 15, 216-224.

Berkowitz, L. and Cottingham, D. R. The interest value and relevance of fear arousing communications. Journal of Abnormal and Social Psychology, 1960, 60, 37-43.

Bernhardson, C. S. Dogmatism, defense mechanisms, and social desirability responding. Psychological Reports, 1967, 20, 511-513.

Bindrim, Paul. A report on a nude marathon. Psychotherapy: theory, research and practice, Fall, 1968, Vol. 5, No. 3, 180-188.

Bindrim, Paul. Nudity as a quick grab for intimacy in group therapy. Psychology Today, June, 1969, Vol. 3, No. 1

Blum, G. S. An experimental reunion of psychoanalytic theory with perceptual vigilance and defense. Journal of Abnormal and Social Psychology, 1954, 49, 94-98.

Boyd, H. S., and Sisney, V. V. Immediate self-image confrontation and changes in self-concept. Journal of Consulting Psychology, 1967, 31, 291-294.

Bradford, L. P., Gibb, J. R., and Benne, K. D. (Eds.). T-Group theory and laboratory method. New York: Wiley, 1964.

Bramel, Dana. In theories of cognitive consistency: A source-book (Eds. R. P. Abelson, Elliot Aronson, W. J. McGuire, T. M. Newcomb, M. J. Rosenberg, and P. H. Tannenbaum.) Chicago: Rand McNally & Co., 1968.

Brehm, J., and Cohen, A. Explorations in cognitive dissonance. New York: Wiley, 1962.

Brown, R. Social Psychology. Glencoe, Ill.: The Free Press, 1965.

Bush, Robert N. and Allen, Dwight W. "Micro-teaching: Controlled practice in the training of teachers." In James M. Cooper and Thomas Stroud (Eds.), Micro-teaching: a description. Stanford University, 1967.

Byrne, D., Blaylock, B. and Goldberg, J. Dogmatism and defense mechanisms. Psychological Reports, 1966, 18, 739-742.

Canter, Francis M. Motivation for self-confrontation in alcoholic patients. Psychotherapy: theory, research and practice, 1969, Vol. 6, No. 1, 21-23.

Carrere, J. Le Psychochoc cinematographique. Principes et technique. Application au traitement des malades convalescents de delirium tremens. Annales Medico-Psychologiques, 1954, 112, Vol. 2, 240-245.

Carrere, J. et al. De quelques resultats de psychochoc cinematographique dans la psychotherapie des delirium et sub-delirium tremens alcooliques. Annales Medico-Psychologiques, 1955, 113, Vol. 2, 46-51.

Carrere, J. Psychogenie de l'alcoolisme et attitude psycho-therapique. Annales Medico-Psychologiques, 1958, 116, Vol. 2, 481-495.

Claus, Karen E. Effects of modeling and feedback treatments on the development of teachers' questioning skills. Technical Report No. 6, Stanford, California: Stanford Center for Research and Development in Teaching, June, 1969. 55 pp.

Clothier, Grant. A theoretical basis for professional laboratory experiences in teacher education. Mid-continent Regional Educational Laboratory, 1966.

Cole, Charles A., Cunningham, Myron A., and Landsman, Theodore. To see one's self. Educational Screen and Audiovisual Guide, September, 1963, 504-505.

Collingwood, Thomas R. and Renz, Laurie. The effects of client confrontations upon levels of immediacy offered by high and low functioning counselors. Journal of Clinical Psychology, 1969, Vol. 25, No. 2, 224-226.

Combs, A. W. and Snygg, D. Individual behavior: A perceptual approach to behavior. Harper and Brothers, 1959.

Cooper, James M., and Stroud, Thomas. Micro-teaching: a description. Stanford University, 1967.

Cornelison, F. S. and Arsenian, J. A study of the responses of psychotic patients to photographic self-image experience. Psychiatric Quarterly, 1960, 34, 1-8.

Curl, David H. AV training. Training in Business and Industry, 1967, 4, (9, September), 14-16.

Desoto, Inc. On the air -- VTR in sales training. Training in Business and Industry, 1967, 4, (7, July), 39, 42, 44.

Dollard, John and Miller, Neal E. Personality and Psychotherapy. New York: McGraw Hill, 1950.

Druckman, D. Dogmatism, prenegotioation experience, and simulated group representation as determinants of dyadic behavior in a bargaining situation. Journal of Personality and Social Psychology, 1967, 6, 279-290.

Erikson, E. Identity and the life cycle. Psychological Issues, 1959, 1 (1), 1-171.

Erlich, H. J. Dogmatism and learning. Journal of Abnormal and Social Psychology, 1961, 62, 148-149. (a)

Erlich, H. J. Dogmatism and learning: A five year follow-up. Psychological Reports, 1961, 9, 283-286. (b)

Erlich, H. J. and Lee, Dorothy. Dogmatism, learning, and resistance to change: A review and a new paradigm. Psychological Bulletin, 1969, Vol. 71, No. 4, 249-260.

Fenichel, O. The psychoanalytic theory of neurosis. New York: W. W. Norton, 1945.

Festinger, L. A theory of social comparison processes. Human Relations, 1954, 7, 117-140.

Festinger, L. A theory of cognitive dissonance. Evanston: Row, Peterson, 1957.

Frick, F. C. Information theory. In S. Koch (Ed.), Psychology: a study of a science. Vol. 2. New York: McGraw-Hill, 1959.

Fuller, F. F.; Bown, O. H.; and Peck, R. F. Creating Climates for Growth. Austin: The Hogg Foundation for Mental Health, The University of Texas, 1967.

Fuller, F. F.; Menaker, S. L.; Peck, R. F.; and Bown, O. H. "Influence of Counseling and Film Feedback on Openness to Pupil Feedback in Elementary Teachers' Filmed Behavior." Proceedings of the 75th Annual Convention of the American Psychological Association, 1967, 359-360.

Fuller, F. F. "Concerns of Teachers: A Developmental Conceptualization." American Educational Research Journal 6: 207-26, March, 1969.

Fuller, F. F.; Peck, R. F.; Bown, O. H.; Menaker, S. L.; White, M. M.; and Veldman, D. J. Effects of Personalized Feedback During Teacher Preparation on Teacher Personality and Teaching Behavior. U. S. Department of Health, Education, and Welfare, Office of Education, Bureau of Research, Final Report, 1969, Project No. 5-0311, Grant No. OE 3-10-032. Austin: The University of Texas, 1969.

Fuller, F. F. and Baker, H. P. Counseling teachers, using video feedback of their teaching behavior: A manual for counseling psychologists. Personal-Professional Development Systems Division, The Research and Development Center for Teacher Education, The University of Texas at Austin, 1970.

Fuller, F. F. Relevance for teacher education: A teacher concerns model. In Press.

Gagne, R. M., and Bolles, R. C. A review of factors in learning efficiency. In John P. DeCecco (Ed.): Human learning in the school. Holt, Rinehart and Winston, Inc., New York, 1963.

Geertsma, Robert H., and Reivich, Ronald S. Repetitive self-observation by videotape playback. Journal of Nervous and Mental Disease, 1965, Vol. 141, No. 1, 29-41.

Gergen, K. J. Effects of interaction goals and personality feedback. Journal of Personality and Social Psychology, 1965, 1 (5), 413-424.

Gibb, J. R. and Platts, Grace N. Role flexibility in group interaction. American Psychologist, 1950, 5, 491.

Goldstein, Arnold P., Heller, Kenneth, and Sechrest, Lee B. Psychotherapy and the psychology of behavior change. New York: Wiley, 1966.

Golembiewski, Robert R., and Blumberg, Arthur. Confrontation as a training design in complex organizations: Attitudinal changes in a diversified population of managers. Journal of Applied Science, 1967, Vol. 3, No. 4, 525-555.

Griver, Jeanette A., Robinson, Margaret, and Cochran, B. B. Structured feedback: a motivational theory and technique for improving job performance and job attitudes. Symposium at American Psychological Association Convention, New York, 1966.

Hall, E. T. The silent language. New York: Doubleday, 1959.

Hallenbeck, P. N. and Lundstedt, S. Some relations between dogmatism, denial and repression. Journal of Social Psychology, 1966, 70, 53-58.

Halverson, C. F., and Shore, R. E. Self-disclosure and interpersonal functioning. Journal of Consulting and Clinical Psychology, 1969, Vol. 33, No. 2, 213-217.

Harvey, O. J., Hunt, D. E., and Schroder, H. M. Conceptual systems and personality organization. New York: Wiley, 1961.

Harway, N. I., Dittmann, A. T., Raush, H. L., Bordin, E. S., and Rigler, D. The measurement of depth of interpretation. Journal of Consulting Psychology, 1955, 19, 247-253.

Hough, John B., and Amidon, Edmund J. Behavior change in student teachers. Amidon, Edmund J., and Hough, John B. (Eds.) Interaction analysis: theory, research and applications. Reading, Mass: Addison-Wesley Publishing Co., 1967. pp. 307-314.

Huntley, W. Judgments of self based upon records of expressive behavior. Journal of Abnormal and Social Psychology, 1940, 35, 398-427.

Ivey, Allen E., Normington, Cheryl J., Miller, C. Dean, Morrill, Weston H., Haase, Richard F. Microcounseling and attending behavior: an approach to prepracticum counselor training. Journal of Counseling Psychology: Monograph Supplement, 1968, Vol. 15, No. 5, Part 2, 1-12.

Janis, I. L. and Feshback, S. Effects of fear-arousing communications. Journal of Abnormal and Social Psychology, 1953, 48, 78-92.

Janis, I. L. and Terwilliger, R. F. An experimental study of psychological resistances to fear arousing communications. Journal of Abnormal and Social Psychology, 1962, 65, 403-410.

Jensen, Paul H. A study of self evaluation applied to in-service education including an annotated bibliography. Teaching Research Division, Oregon State System of Higher Education, Monmouth, Oregon, 1968.

Jourard, S. M., and Lasakow, P. Some factors in self-disclosure. Journal of Abnormal and Social Psychology, 1958, 56, 91-98.

Jourard, S. M. Self-disclosure and other cathexis. Journal of Abnormal and Social Psychology, 1959, 59, 428-431.

Jourard, S. M. and Landsman, M. J. Cognition, cathexis, and the "dyadic effect" in men's self-disclosing behavior. Merrill-Palmer Quarterly, 1960, 6, 178-186.

Kagan, Norman; Krathwohl, David R.; and Miller, Ralph. Stimulated recall in therapy using video tape: A case study. Journal of Counseling Psychology, 1963, Vol. 10, No. 3, 237-243.

Kagan, Norman; Krathwohl, David R.; Campbell, Robert; Goldberg, Alan; Hurley, Shirley; Pederson, Gordon; Schauble, Paul. Interpersonal Process Recall: A report to the profession. NDEA, Title VII. Grant Number OE 7-32-0410-270. Michigan State University, East Lansing, Michigan, 1967, 30 pages (mimeographed).

Kallenback, Warren. Microteaching as a teaching methodology. nd. 6 p. Paper presented at a conference on "Instructional Methods and Teacher Behavior", Berkeley, California, 1966.

Kaplan, M. F., and Singer, E. Dogmatism and sensory alienation: An empirical investigation. Journal of Consulting Psychology, 1963, 27, 486-491.

Kolb, D. A.; Winter, S. K.; and Berlew, D. E. Self-directed change: Two studies. Journal of Applied Behavioral Science, 1968.

Krathwohl, David R., Bloom, Benjamin S., and Masia, Bertram B. Taxonomy of Educational Objectives - Handbook II: Educational Domain. David McKay Company, Inc. New York, 1968.

Lawrence, S. B. Video-tape and other therapeutic procedures with nude marathon groups. The American Psychologist, 24, 4, 1969.

Levy, L. H. Psychological interpretation. New York: Holt, Rinehart and Winston, 1963.

Logue, P. E., Zenner, M., and Gohman, G. Video-tape role playing in the job interview. Journal of Counseling Psychology, 1968, Vol. 15, No. 5, 436-438.

Machover, K. Drawing of the human figure: A method of personality investigation. In H. H. Anderson and G. L. Anderson (Eds.), An introduction to projective techniques. New York: Prentice-Hall, 1951, Pp. 341-369.

May, R. The meaning of anxiety. New York: Ronald Press, 1950.

McDonald, F. J.; Allen, D. W. and Orme, M. E. Effect of self-evaluation and social reinforcement on the acquisition of a teacher behavior. Paper presented at the American Educational Research Association Convention, February, 1966.

McDonald, Frederick J., Allen, Dwight W., Seidman, Earl. Televised models for teacher training. Stanford, California: Stanford University, School of Education, N.D., 16 pages (mimeographed).

Mead, G. H. Mind, self, and society. Chicago: University of Chicago, 1934.

Michigan State University. Behavioral science elementary teacher education program, Vol. 3, Final Report Project No. 89025, Contract No. OEC-0-8-089025-3314(010), pp. 115-143.

Miles, Matthew B. Learning to work in groups: a program guide for educational leaders. New York, Horace Mann-Lincoln Institute of School Experimentation, Teachers College, Columbia, 1959.

Miller, G., Galanter, E., and Pribram, K. H. Plans and the structure of behavior. New York: Holt, 1960.

Miller, Marvin F. Responses of psychiatric patients to their photographed images. Diseases of the Nervous System, 1962, 23, 296-298.

Montague, J. A. Spontaneous drawings of the human form in childhood schizophrenia. In H. H. Anderson and G. L. Anderson (Eds.), An introduction to projective techniques. New York: Prentice-Hall, 1951. Pp. 370-385.

Moore, F. J., Chernell, E., and West, M. J. Television as a therapeutic tool. Archives of General Psychiatry, 1965, 12, 217-220.

Moreno, J. L. Psychodrama and group psychotherapy. Sociometry, 1946, Vol. 9, No. 2-3, 249-253.

Muehlberg, Nancy; Pierce, R., and Drasgow, James. A factor analysis of therapeutically facilitative conditions. Journal of Clinical Psychology, 1969, 25, 93-95.

Murray, H. A. Studies of interpersonal disputation, American Psychologist, 1963, 18, 28-36.

Newlove, B. W. The 15-Minute Hour: An Early Teaching Experience. Report Series No. 23. Austin: Research and Development Center for Teacher Education, The University of Texas, September, 1969.

Nielsen, Gerhard. Studies in self confrontation. Howard Allen, Inc. Publishers, Cleveland, 1964.

Nunnally, J. C. and Bobren, A. M. Variables governing the willingness to receive communications on mental health. Journal of Personality, 1959, 27, 38-46.

Pribram, K. H. The new neurology and the biology of emotion. American Psychologist, 1967, 22, 830-838.

Raush, H. L., Sperber, Z., Rigler, D., Williams, J., Harway, N. I., Bordin, E. S., Dittmann, A. T., Hays, W. L. A dimensional analysis of depth of interpretation. Journal of Consulting Psychology, 1956, 20, 43-48.

Ricker, L. Use of audio-visual feedback in improving social skills of mentally retarded young adults. Paper read at American Psychological Association Convention, Philadelphia, August 31, 1963. Cf. American Psychologist, 1963, 18, 404.

Robinson, Margaret B. Effects of video-tape feedback versus discussion session feedback on group interaction, self-awareness and behavioral change among group psychotherapy participants. Unpublished doctoral dissertation. University of Southern California, 1968.

Rogers, Arthur R. Videotape feedback in group psychotherapy. Psychotherapy: Theory, research and practice, 1968, Vol. 5, No. 1, 37-39.

Rogers, C. Client-centered therapy. Boston: Houghton Mifflin Company, 1951.

Rogers, C. R. The necessary and sufficient conditions of therapeutic personality change. Journal of Consulting Psychology, 1957, 21, 95-103.

Rogers, C. R. The characteristics of a helping relationship. In M. I. Stein (Ed.) Contemporary psychotherapies. New York: Free Press, 1961, pp. 95-112.

Rokeach, M. The open and closed mind. New York: Basic Books, 1960.

Rokeach, M. Reyher, J., and Wiseman, R. An experimental analysis of the organization of belief systems. In M. Rokeach, Beliefs, attitudes and values. San Francisco: Jossey-Bass, 1968.

Roush, Robert E. Changing teacher behavior and videotape feedback. SRIS Quarterly, Summer, 1969.

Schein, E. H. and Bennis, W. G. Personal and organizational change through group methods. New York: Wiley, 1965.

Schiff, S. B., and Reivich, R. S. Use of television as an aid to psychotherapy supervision. Archives of General Psychiatry, 12: 217-220, 1965.

Schueler, Herbert, and Gold, Milton J. Video recordings of student teachers - A report of the Hunter College research project evaluating the use of kinescopes in preparing student teachers. Journal of Teacher Education, 1964, 15, 358-364.

Schumacher, A. S., Wright, J. M., and Wiesen, A. E. The self as a source of anxiety. Journal of Consulting and Clinical Psychology, 1968, Vol. 32, No. 1, 30-34.

Sigall, Harold, and Helmreich, Robert. Opinion change as a function of stress and communicator credibility. Journal of Experimental Social Psychology, 1969, 5, 70-78.

Skinner, B. F. The behavior of organisms. New York: Appleton-Century-Crofts, 1938.

Smith, Hope M. and Clifton, Marguerite A. The viewing of oneself performing selected motor skills in motion pictures and its effect upon the expressed concept of self in movement. USOE Grant No. 704105, Title VII Project, No. 486, University Microfilms Publication No. 63-2863. Los Angeles: University of California, August, 1961, 20 p. (mimeographed).

Speisman, J. C. Depth of interpretation and verbal resistance in psychotherapy. Journal of Consulting Psychology, 1959, 23, 93-99.

Spilken, Aron Z., Jacobs, Martin A., Muller, James J. and Knitzer, Jane. Personality characteristics of therapists: description of relevant variables and examination of conscious preferences. Journal of Consulting and Clinical Psychology, 1969, 33, 317-326.

Spitzer, R. S., Jackson, D. D., and Satir, Virginia M. Resource paper: A technique for training in conjoint family psychotherapy. American Psychiatric Association Meeting, Los Angeles, 1964.

Staines, Graham L. A comparison of approaches to therapeutic communications. Journal of Counseling Psychology, 1969, Vol. 16, No. 5, 405-414.

Stoller, F. Focused feedback with videotape: extending the group's functions. In Gazda, G. M. (Ed.) Basic innovations in group psychotherapy and counseling. Springfield, Ill.: Charles C. Thomas. 1968.

Sullivan, H. S. The psychiatric interview. New York: Norton, 1954.

Swenson, C. H., Jr., Empirical evaluations of human figure drawings. Psychological Bulletin, 1957, 54, 431-477.

Thoreson, C. E. Video in the college classroom: An exploratory study. Personnel and Guidance Journal, 1966, 45, (October), 144-149.

Tintera, J. B. Analysis of methods in which application of new communications media may improve teacher preparation in language, science and mathematics. USOE Title VII, Project No. 008E, University Microfilms Publication No. 64-4837. Detroit. Wayne State University, n.d., 108.

Tosi, D. J., Fagan, T. K., and Frumkin, R. M. Extreme levels of dogmatism and perceived threat under conditions of group personality testing. Psychological Reports, 1968, 22, 633. (a)

Tosi, D. J., Fagan, T. K., and Frumkin, R. M. Relations of levels of dogmatism and perceived threat under conditions of group personality testing. Perceptual and Motor Skills, 1968, 26, 481-482. (b)

Truax, C. B. Effective ingredients in psychotherapy. Journal of Counseling Psychology, 1963, 10, 256-263.

Truax, C. B. and Carkhuff, R. F. Experimental manipulation of therapeutic conditions. Journal of Consulting Psychology, 1965, 29, 119-124.

Truax, C. B. Reinforcement and nonreinforcement in Rogerian psychotherapy. Journal of Abnormal Psychology, 1966, 71, 1-9. (a)

Truax, C. B. Some implications of behavior therapy for psychotherapy. Journal of Counseling Psychology, 1966, 13, 160-170. (b).

Truax, Charles B., Schuldt, W. John, and Wargo, Donald G. Self-ideal concept congruence and improvement in group psychotherapy. Journal of Consulting and Clinical Psychology, 1968, Vol. 32, No. 1. 47-53.

Vacchiano, Ralph B., Strauss, Paul S., and Hochman, Leonard. The open and closed mind: a review of dogmatism. Psychological Bulletin, 1969, Vol. 71, No. 4, 261-273.

van der Keen, Ferdinand. Basic elements in the process of psychotherapy: A research study. Journal of Counseling Psychology, 1967, Vol. 31, No. 3, 291-294.

Wahlberg, Herbert J. Changes in the self concept during teacher training. Psychology in the Schools, 1967, Vol. 4, No. 1, 14-21.

Walz, G. R. and Johnston, J. A. Counselors look at themselves on video tape. Journal of Counseling Psychology, 1963, 10, (3), 232-236.

Ward, W. D., and Bendak, S. The response of psychiatric patients to photographic self-image experience. Newsletter for research in psychology. Veterans Administration, 1964, 6(4), 29-30.

White, B. J., Alter, R. D. and Rardin, M. Authoritarianism, dogmatism, and usage of conceptual categories. Journal of Personality and Social Psychology, 1965, 2, 293-295.

White, B. J. and Alter, R. D. Dogmatism and examination performance. Journal of Educational Psychology, 1967, 58, 285-289.

Winter, Sara K., Griffith, Jeffery C. and Kolb, David A. Capacity for self-direction. Journal of Consulting and Clinical Psychology, 1968, Vol. 32, No. 1, 35-41.

Wolff, W. Diagrams of the unconscious. New York: Grune and Stratton, 1948. Pp. 177-184.

Woody, Robert H. and Schauble, Paul G. Videotaped vicarious desensitization. Journal of Nervous and Mental Disease, 1969, 148, 281-286.

Zimbardo, P. G. The cognitive control of motivation. Scott, Foresman and Company, 1969.

Young, David B. The effectiveness of self instruction in teacher education using modelling and video-tape feedback. Paper presented at the American Educational Research Association, 1968.